P. L. Strord,

Brick Machine,

No. 63,333, Patented Mar. 26, 1867.

Fig: 2.

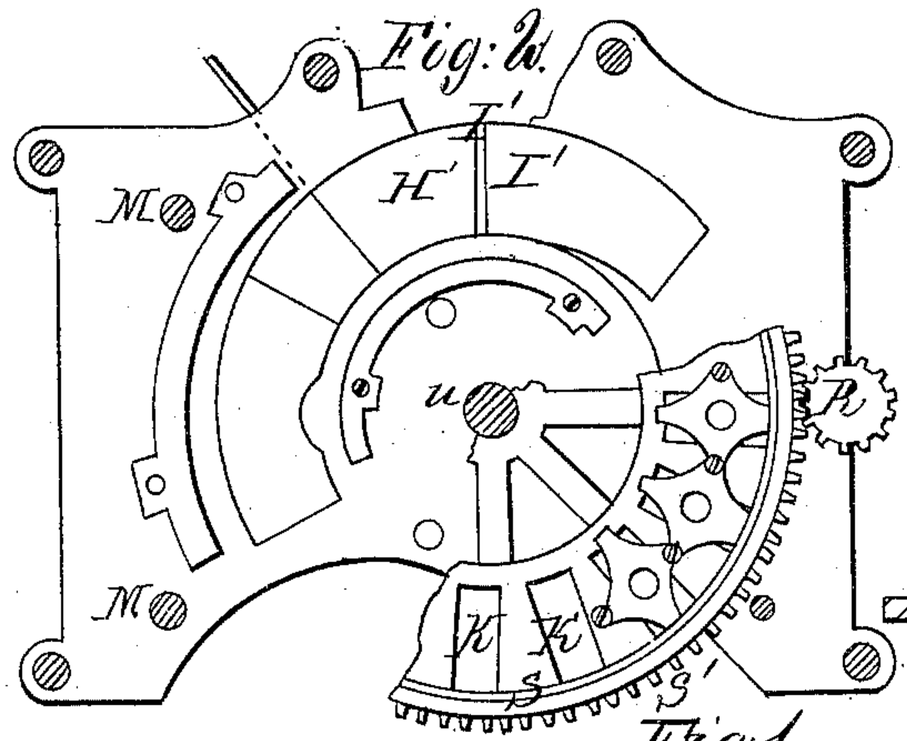

Fig: 3.

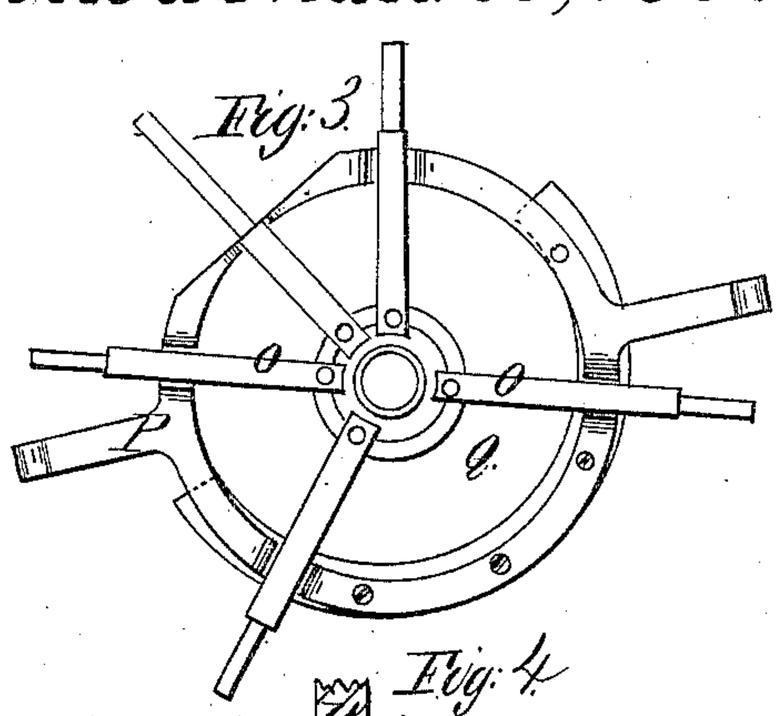

Fig: 4.

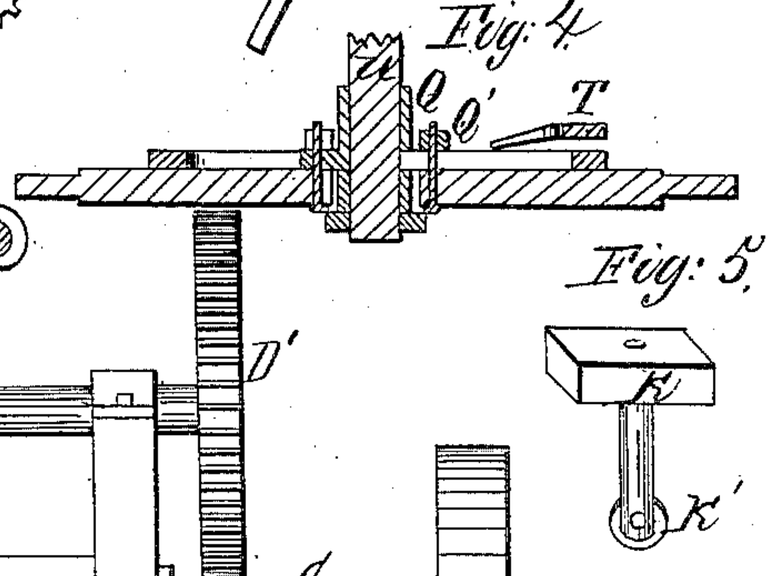

Fig: 5.

Fig: 1

Witnesses:
L. Murphy.

Inventor:
Porter L. Strord.
by D. P. McMurray Her his Attys.

THE NORRIS PETERS CO., WASHINGTON, D. C.

United States Patent Office.

PORTER L. SWORD, OF ADRIAN, MICHIGAN.

Letters Patent No. 63,333, *dated March* 26, 1867.

IMPROVED BRICK MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, PORTER L. SWORD, of Adrian, in the county of Lenawee, and State of Michigan, have invented certain new and useful improvements in Brick Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a perspective view.

Figure 2 is a bottom view.

Figure 3 is a bottom view, showing the mode of adjustably supporting the horizontal rods.

Figure 4 is a section on the line *x x*.

Figure 5, a perspective view of the followers detached.

The same letters are employed in all the figures in the indication of the same parts.

These improvements are intended to be applied in the construction of brick machines under the patent of myself and George S. Tiffany, assignor to myself, issued June 14, A. D. 1864, to the specification of which patent reference is here made for greater certainty in such matters as may relate to the description of the parts of the original machine.

The machine is driven by a pulley, A, on the shaft B, on which is placed also the bevel-pinion C, which drives the bevelled wheel C′, and the pinion D, which drives the spur-wheel D′ on the shaft E, which carries the bevel-pinion F, driving the bevel-wheel F′ on the shaft G′ of the pug-mill G. The clay is fed from the pug-mill through the bed-plate H, under the adjustable inclined plate H′, into the mould-wheel S. The operation of the pug-mill and mould-wheel is fully explained in the patent to which reference has been made, and it is not necessary to repeat the description here, as my improvements are not applied thereto. Opposite and near to the end of the adjustable press-plate H′ is placed the knife, which is constructed in several parts. A plate, I, with a vertical flange is attached horizontally under the bed-plate H by set-screws I^2, and also by set-screws passing through slots in the vertical flange. A steel plate with a bevelled edge in front is fastened to this plate. By means of the set-screws the knife may be vertically adjusted in relation to the mould-wheel as desired; and while the edge shears off the superfluous clay above the moulds the elongated surface placed above the moulds smooths the upper surface of the brick, which is carried under and in contact with it as the mould-wheel revolves. The knife is intended to set immediately upon the surface of the wheel S, and it is necessary that it should be adjustable, so that it may be accommodated to the wheel, which is subject to variations in position. The space between the knife and plate H is only sufficient to permit the clay cut off to escape freely. In the original patent above mentioned the mould-wheel is described as being sustained upon the wheel N, supported by the rods M from the bed-plate H. These rods held the outer ends of the shafts O, passing through the wheels N, the inner ends thereof being sustained upon a block placed underneath the centre of the mould-wheel. While the outer ends of the axles O were adjustable the inner ends were fixed. It is important that the wheels N should be adjustable, so that each may be held firmly at all times against the wheel S; and one of my improvements consists in the mode of suspending the wheels N, and also the wheel L, which actuates the followers K, as explained in the said original patent. The axles of all these wheels are respectively suspended by the rods M from the bed-plate H at their outer ends. The length of the rods M may be controlled by the nuts screwed on to the same above the bed-plate. The inner ends of the axles are suspended upon the collar Q, which is fastened by a nut to the stationary shaft U. This collar has notches in its under side, in which the ends of the axles O are received, and supported respectively upon bolts Q′, the length of which may be regulated by nuts on the upper end projecting through the collar. By the means set forth the ends of the axles O may be adjusted independently, so as to preserve the relation of the wheels N to the mould-wheel. The ring P, placed above the rods O, has rounded recesses in its lower face to receive and brace said rods. This ring is the invention of Henry Aiken, and I do not claim it. He was also the inventor of the collar Q instead of the central block. My improvement in the latter case consists in making the attachment of the several rods O to the collar Q in such manner that the rods may be independently adjusted, both at their outer and their inner ends. The mould-wheel S has its driving gearing upon its periphery, and it is driven by the spur-pinion R on the lower end of the shaft of the bevel-wheel C. The shaft U is stationary, the wheel S turning around it. The remaining

portions of the brick machine are constructed as described in said original patent; and, as my improvements do not relate to any part thereof, it is not necessary to repeat the description thereof in this specification.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The adjustable knife, when constructed with a cutting edge set opposite to and so near the press-plate H′ that there is merely room for the shaving of clay to rise between them, and having a cutting edge and elongated horizontal blade adjustably atttached at both ends to and below the bed-plate H, and resting upon the revolving mould-wheel S, so as to perform the double function of cutting off the superfluous clay and smoothing the upper surface of the brick, substantially as described.

2. So suspending the rods O sustaining the wheels N and L that they may be independently adjusted at both ends, substantially as and for the purpose set forth.

3. The combination of the bed-plate H and stationary shaft U with the rods M and O, wheels N and L, collar Q, bolts Q′, and mould-wheel S, substantially as and for the purpose set forth.

4. The arraugement in a brick machine of a stationary shaft U, mould-wheel S, revolving around the same, and having gearing upon its periphery, and the driving spur-pinion R, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PORTER L. SWORD.

Witnesses:

R. MASON,

JOHN D. BLOOR.